

REMARKS

Applicants acknowledge the Examiner's indication of allowable subject matter with respect to dependent claims 7, 35, 37, 38, 57, and 63-65. Claims 39-44, 46-53, and 66-83 currently stand withdrawn. Claims 2-6, 8-14, 17-19, 21-23, 30-34, 58-61, and 84-88 stand rejected.

In the most recent Office Action, the Examiner finally rejected claims 2-6, 8-14, 17-19, 21-23, 30-34, 58-61, and 84-88 under 35 USC §102 as anticipated by, or alternatively under 35 USC §103 as unpatentable over Leak et al(hereinafter "Leak," U.S. Pat. No. 5,763,041). Claims 84 and 87 are representative independent claims, and applicants will focus their arguments on those two representative claims for purposes of this Request.

In rejecting the claims, the Examiner advanced several theories with respect to certain claimed features of the invention. Applicants will discuss each in turn. Applicants submit that upon careful reconsideration by the Examiner, the stated bases for the rejections are not well taken and should be withdrawn.

***Overlapping Ranges***

In the methods recited in independent claims 84 and 87, applicants recite that the first material comprising a nonwoven spunbonded polymer fabric has a "minimum weight of approximately 50 g/m<sup>2</sup>." As previously explained, when the prior art attempted to laminate heavier fabric, i.e., nonwoven spunbonded polymer fabric having a minimum weight of approximately 50 g/m<sup>2</sup> and visible interference patterns, problems of blistering occurred. Practice of embodiments of the present invention prevent these problems and avoid the occurrence of visible unlaminated patches of fabric in the form of blisters in the resultant laminate.

In applicants' previous response filed on or about March 24, 2004, applicants provided the Examiner with samples of a laminate made in accordance with an embodiment of the present invention and cut from a larger roll together with a sample of a prior art laminate for comparison purposes. The prior art laminate included visible unlaminated patches in the form of blisters, while the laminate made in accordance with an embodiment of the invention did not have

blisters. These samples clearly demonstrate both the problem in the art when attempting to laminate heavier weight materials as well as applicants' solution to that problem.

The Examiner asserts that Leak meets the recited fabric weight range because Leak recites a laminate in which the second layer comprises a nonwoven material having a basis weight "of from about 5 grams per square meter to about 60 grams per square meter." Specifically, the Examiner has asserted that "[s]ince the weight range taught by Leak et al overlaps with the recited weight range; and since the weight range disclosed by Leak et al has '*sufficient specificity*' as evidence [sic, evidenced] from the fact that, an end point (i.e. 60 g/m<sup>2</sup>) of a weight range taught by Leak et al falls within the recited weight range ... the recited overlapping weight range is anticipated."

Responding to applicants' arguments that Leak et al cannot anticipate because one would have to *select* a fabric weight from a broadly recited range of weights, the Examiner referred to MPEP §2131.03. It was asserted that such section instructs that prior art which discloses a range within or overlapping with a claimed range "anticipates if the prior art range discloses the claimed range with '*sufficient specificity*.'" The Examiner's reliance on this section of the MPEP and the cases cited therein are believed to be both misplaced as well as legally incorrect.

The reliance is misplaced because that section of the MPEP is discussing case law relating to claims to compositions of matter having a recited range of weight percentages or a recited range of properties. Applicants are not claiming a composition of matter. Rather they are claiming a method of laminating two materials wherein the first material is of a construction and weight which would otherwise cause unlaminated patches in the form of blisters to be formed during the lamination process if the emboss points on the first material and portions of the lamination points on the calender roll were in registration. As previously pointed out to the Examiner, Leak describes a very broad range of nonwoven material weights, only some of which would be of a weight that would cause a blistering problem during lamination. The specific nonwoven material used by Leak in the working examples has a weight that is less than one-half of that recited in applicants' claims (24 g/m<sup>2</sup>; col. 10, line 51).

Further, and as explained in greater detail below, Leak's process differs from that claimed by applicants. The actual working examples in Leak use lighter weight materials well

below applicants' claimed minimum weight. And, Leak uses a process that differs in significant respect from the process claimed by applicants.

Nor has "sufficient specificity" been established. Leak's described range encompasses multiple possible fabric weights. And, the only specific teachings in Leak point to the selection of lighter basis weight fabrics from that broad range. This falls far short of the "clearly envisaging" standard set forth in MPEP §2131.02/03. The Examiner also erroneously treats Leak's "end point" as a teaching of a specific heavy basis weight material. The asserted "end point" is simply an arbitrary number chosen to define the top portion of a range, not any actual material the Leak specifically taught or used. All ranges, by necessity, must have both a lower "end point" and an upper "end point." However, \*\*\*\*\*

The reliance is legally incorrect because MPEP §2131.03 relies upon a PTO Board of Appeals decision in *Ex parte Lee*, 31 USPQ2d 1105 (Bd. Pat. App. & Inter. 1993). However, the Examiner and the PTO Board are bound to follow precedential decisions of the Court of Appeals for the Federal Circuit (and its predecessor court the CCPA). The leading Federal Circuit cases on the topic of overlapping ranges are found in MPEP §2144.05 relating to *obviousness*, not anticipation. See, e.g., *In re Wertheim*, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 16 USPQ2d 1934 (Fed. Cir. 1990); and *In re Geisler*, 43 USPQ2d 1362 (Fed. Cir. 1997).

Leak et al does not anticipate the recited weight range. In a situation with overlapping ranges, there must be a selection of a portion of the range to meet the claimed invention. The act of selecting a specific weight negates anticipation because that act requires choice, and such choice would not necessarily be within the claimed range.

Nor would Leak et al have fairly taught or suggested the use of such a heavy material in the claimed process. The Examiner's fall back rejection, that "it would have been obvious ... to use a spunbonded nonwoven having a weight basis of around 60 g/m<sup>2</sup>, because one in the art would have applied a workable weight range basis for a spun-bonded web disclosed by Leak et al" does not withstand close scrutiny. Independent claims 84 and 87 require the production of a laminate made from a first material in the form of a nonwoven spunbonded fabric with a minimum weight of approximately 50 g/m<sup>2</sup> and having an emboss pattern formed thereon to a non-embossed second polymer material by controlling the amount of point mis-registration between the patterns during lamination to avoid the occurrence of visible unlaminated patches in

the form of blisters (see Figure 5A and sample, and laminate 60 of Figure 6 and sample). Such features are not taught or suggested by Leak et al.

Applicants' specification describes addressing and overcoming the problem of "blistering," i.e. avoiding the appearance of visible unlaminated patches in the form of blisters in the resultant laminate, as stated in the specification at page 7, lines 19 to 26. There is no teaching or suggestion by Leak et al that embossed materials one layer of which has a **minimum weight of approximately 50g/m<sup>2</sup>** would suffer the problem of blistering. This is not surprising given that the unbonded areas 28 (Figure 3 of Leak et al) form loops, and the preferred range of basis weights for the second non-woven layer 14 is **from about 15 g/m<sup>2</sup> to about 30 g/m<sup>2</sup>** (column 4, lines 2 and 3), with a specific value of **24 g/m<sup>2</sup>** in the Examples section (column 10, lines 51 and 52). All of these materials are "light weight" (relatively thin) non-woven embossed material second layers in which blistering would not appear (see lines 24 to 30 on page 6 of Applicants' specification), i.e., there would be no visible unlaminated patches in form of blisters. Thus, Leak does not address nor purport to solve the problem addressed by applicants.

If one were to select a "workable weight range" as suggested by the Examiner from the values described by Leak et al, one would select the values of **5g/m<sup>2</sup>** and **15 g/m<sup>2</sup>** at the bottom of the two ranges specified, and conceivably the specific value of **24 g/m<sup>2</sup>**. This is because Leak et al is concerned with disposable products such as diapers and clothing which use lightweight relatively thin materials to obtain the "drape" characteristics essential with products that are designed for wear. On the other hand, Applicants' specific examples are all consistent with the recited **approximately 50g/m<sup>2</sup>** minimum weight of embossed non-woven material. It would not have been obvious for one skilled in the art to select a heavier material for use in Leak et al's process because, as noted above, Leak is concerned with providing a lightweight laminated material for disposable uses such as diapers. There is no motivation to make such a selection, for to do so would destroy the lightweight laminate needed by Leak et al for its intended purpose. Thus, it is submitted that the feature of the nonwoven spunbonded polymer fabric having a minimum weight of approximately 50g/m<sup>2</sup> as recited in independent claims 84 and 87, serves as a basis to patentably distinguish the claims from Leak et al. However, that is not the only basis of distinction.

***Lack of Inherency of a Visible Interference Pattern in Leak et al's Laminate***

In the final rejection, the Examiner also asserted that Leak's process would inherently result in a laminated web as claimed by applicants. The Examiner further asserted that the Leak process was "identical or substantially identical" such that the burden of proving non-inherency shifted to applicants. Applicants respectfully disagree with the Examiner's assertions.

Independent claims 84 and 87 recite, *inter alia*,

"bringing said first and second materials together and laminating said first and second materials to one another ... wherein said first material has a weight that causes unlaminated patches in the form of blisters during the lamination process if portions of said emboss points on said first material and portions of said lamination points on said calender roll are in registration."

Leak does not teach or suggest such a process because Leak desires the use of light weight materials that do not produce blisters. Nowhere in Leak is there any teaching or discussion whatsoever of blister formation or how to avoid it. That is because Leak's process is substantially *different* than applicants' claimed process, not "identical or substantially identical" as alleged by the Examiner. Leak is directed to providing a "bulked" fabric (see Fig. 1) that serves as the "loop" portion of a hook-and-loop fastening system. The working examples in Leak (Cols. 10 and 11) describe a lamination process in which the spunbond material is driven at *twice* the linear speed of the polypropylene film to create a "bulked" laminate. This process is quite different from that taught and claimed by applicants. Applicants use a different weight material, control the amount of point mis-registration during lamination, and do not form a "bulked" laminate material.

Further, in the accompanying declaration by co-inventors Squires and Woodbridge, applicants have provided samples of laminated materials which are believed to have been made in accordance with Leak's teachings. As the Examiner can observe, and as reported in that declaration, there is no blistering or visible interference pattern in the laminated material. Applicants submit that the Examiner has fallen far short of carrying his initial burden of establishing inherency.

***Leak's Process Does Not Control the Amount of Point Mis-Registration***

In the final action, the Examiner asserted that the amount of point mis-registration “must be inherently controlled in the process taught by Leak et al.” Again, applicants respectfully disagree. The Examiner may have misunderstood applicants’ discussion of Leak in their previous response.

In Leak et al., the term “first bonded areas” refers to the bonding inherent in the raw material, i.e. the spunbonded nonwoven fabric (non-woven material 18 in Figure 2) as received. “Second bonded areas” refers to the pattern of bonding applied by the lamination process and, in Leak, is the same as the pattern of first bonded areas. In other words, **every bond point on the lamination roll results in a bond point in the laminate.**

This does not occur when using nonwoven materials having a minimum weight of approximately 50 g/m<sup>2</sup> as claimed because **not** every point in the bond pattern of the lamination (calender) roll results in a bond point in the laminate. The specification teaches that if the first and second patterns are too similar (i.e., there is point to point registration), then relatively large areas are formed in which the emboss points are co-incident with the lamination points and, if the fabrics are a minimum of approximately 50g/m<sup>2</sup>, lamination bonding is affected in these areas as a result and can give rise to totally un-laminated patches that can be seen in the form of blisters. Such does not occur in Leak’s process.

In Leak, the percentage bond areas, A (Figure 7) of 5.1; 7.7; 15.4; 8.5; 12.8; 4.3; 28.8 and 19.1; percentage bond area B (Figure 8) of 8.5 and percentage bond area C (Figure 9) of 8.5 in Table 2 refer to the percentage bond areas of Figures 7, 8 and 9 which refer to the laminates of Leak et al’s invention. This demonstrates that, for Leak, every bond point on the single lamination pattern roll results in a bond point in the laminate. The percentage bond areas quoted in Table 2 are calculated by multiplying the pin size by the pin density (both quoted in Table 2). Thus the second bonded areas are a function of the lamination pattern **only**. In contrast, in embodiments of the present invention, the bonded areas of the laminate are a function of the lamination pattern (pin size x pin density) **minus the “pin” areas co-incident with the first bonded areas.**

Thus, while Leak may use different pattern rolls (col. 11, line 31), which have different pin sizes and pin densities to provide different levels of bond area, there is no control of point mis-registration. For each pattern roll, the result is that each pin (bond point) on the pattern roll

results in a corresponding bond point in the laminate. This is not so in the claimed process where the use of heavier nonwoven spunbonded material ("a minimum weight of approximately 50 g/m<sup>2</sup>") prevents bond formation at every bond point.

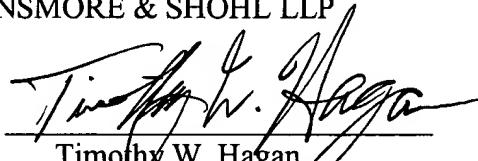
***Conclusion***

For all of the above reasons, applicants submit that claims 2-14, 17-19, 21-23, 30-35, 37, 38, 57-61, 63-65, and 84-88 are patentable over Leak and are in condition for allowance. Early notification to that effect is respectfully solicited.

Respectfully submitted,

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